CLAIMS

I/claim:

1. A vehicle headlamp system including a headlamp and configured to control illumination of lamp units in accordance with a driving condition, the headlamp comprising lamp units housed in a lamp chamber defined by a lamp body, and a front lens, and to emit a beam ahead of said vehicle in a light distribution pattern, the system comprising:

a dimming unit that controls said illumination by adjusting an amount of power fed to a light source of at least one of the lamp units to adjust the quantity of light radiated from said lamp unit, wherein

said dimming unit gradually decreases an effective value of a light source applied voltage to extinguish said lamp unit, and sets said effective value of said light source applied voltage to zero in one stroke when said effective value of said applied voltage has decreased to a threshold value.

2. The vehicle headlamp system according to claim 1, wherein said dimming control decreases said effective value of said voltage applied to said light source to a threshold value over a period of about one to two seconds.

3. The vehicle headlamp system according to claim 1, wherein said threshold value of said effective value of said

light source applied voltage is a value within a range of about 7 volts to 9 volts.

4. The vehicle headlamp system according to claim 1, wherein dimming control performed by said dimming unit at the time of extinction is configured to lower said effective value of said light source applied voltage to a threshold value along a locus of an upwardly-convex-shaped continuous hyperbola.

5. The vehicle headlamp system according to claim 1, wherein at least one of said lamp unit and said auxiliary lamp subjected to said dimming control operation are configured to be illuminated and extinguished based on a switching operation;

wherein, when illumination of an environment is at least a value, power is not fed to said light source of said one of said lamp unit and said auxiliary lamp when said switching operation is performed; and

wherein, when illumination of said environment is at least said value or more during illumination of said at least one of said lamp unit and said auxiliary lamp, said effective value of said voltage applied to said light source of said at least one of lamp unit and said auxiliary lamp is set to zero in one stroke.

6. The system of claim 1, wherein said threshold value

of said effective value of said light source applied voltage is one of about 8.5 volts and about 9.0 volts.

7. The system of claim 1, wherein said driving condition is based on an input received from at least one of a vehicle speed sensor switch, a blinker adjustment switch, a steering angle sensor, and a beam changeover switch.

8. A vehicle headlamp system having a headlamp and an auxiliary lamp, and configured to control illumination of one of at least one lamp unit and said auxiliary lamp in accordance with a driving condition, the headlamp having at least one lamp unit housed in a lamp chamber defined by a lamp body, and a front lens, and to emit a beam ahead of said vehicle in a light distribution pattern, the system comprising:

a dimming unit that controls said illumination by adjusting at least one of (a) an amount of power fed to a light source of at least one of the at least one lamp unit, and (b) an amount of power fed to a light source of said auxiliary lamp to adjust at least one of (a) a quantity of light radiated from said lamp unit and (b) a quantity of light radiated from said auxiliary lamp unit, both said lamp unit and said auxiliary lamp unit provided in said headlamp, wherein

said dimming unit gradually decreases an effective value of a light source applied voltage to extinguish at least one

of said lamp unit and said auxiliary lamp, and sets said effective value of said applied voltage to zero in one stroke when said effective value of said applied voltage has decreased to a threshold value.

9. The vehicle headlamp system according to claim 8, wherein said dimming control decreases said effective value of said voltage applied to said light source to a threshold value over a period of about one to two seconds.

10. The vehicle headlamp system according to claim 8, wherein said threshold value of said effective value of said light source applied voltage is a value within a range of about 7 volts to 9 volts.

11. The vehicle headlamp system according to claim 8, wherein dimming control performed by said dimming unit at the time of extinction is configured to lower said effective value of said light source applied voltage to a threshold value along a locus of an upwardly-convex-shaped continuous hyperbola.

12. The vehicle headlamp system according to claim 8, wherein at least one of said lamp unit and said auxiliary lamp subjected to said dimming control operation are configured to be illuminated and extinguished based on a switching operation;

wherein, when illumination of an environment is at least a value, power is not fed to said light source of said one of said lamp unit and said auxiliary lamp when said switching operation is performed; and

wherein, when illumination of said environment is at least said value or more during illumination of said at least one of said lamp unit and said auxiliary lamp, said effective value of said voltage applied to said light source of said at least one of lamp unit and said auxiliary lamp is set to zero in one stroke.

13. The system of claim 8, wherein said threshold value of said effective value of said light source applied voltage is one of about 8.5 volts and about 9.0 volts.

14. The system of claim 8, wherein said driving condition is based on an input received from at least one of a vehicle speed sensor switch, a blinker adjustment switch, a steering angle sensor, and a beam changeover switch.

15. A vehicle headlamp system configured to control illumination of one of a lamp unit and an auxiliary lamp disposed in a vicinity of said headlamp, in accordance with a driving condition and to emit a beam ahead of said vehicle in a light distribution pattern, comprising:

the headlamp including at least one lamp unit housed in a lamp chamber defined by a lamp body, and a front lens; and

means for controlling said illumination by adjusting at least one of (a) power input to a light source of the lamp unit, and (b) power input to a light source of said auxiliary lamp, to respectively adjust at least one of (a) a quantity of light radiated from said lamp unit and (b) a quantity of light radiated from said auxiliary lamp unit, wherein

said means for controlling gradually decreases an effective value of a light source applied voltage to extinguish said one of said lamp unit and said auxiliary lamp, and sets said effective value of said applied voltage to zero in one stroke when said effective value of said applied voltage has decreased to a threshold value.